Template - NRR-058

March 31, 2000

Mr. S. E. Scace - Director
Nuclear Oversight and Regulatory Affairs
c/o Mr. David A. Smith
Northeast Nuclear Energy Company
P. O. Box 128
Waterford, CT 06385-0128

SUBJECT: MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENT RE: STEAM GENERATOR HYDRAULIC SNUBBERS (TAC NO. MA6562)

Dear Mr. Scace:

The Commission has issued the enclosed Amendment No. 244 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, in response to your application dated September 7, 1999.

The amendment removes the current special exception which precludes applying the 18-month functional testing surveillance to the Steam Generator Hydraulic Snubbers for Technical Specification 3/4.7.8, "Plant Systems, Snubbers."

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/RA/

Jacob I. Zimmerman, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures: 1. Amendment No. 244 to DPR-65
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 31, 2000

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c/o Mr. David A. Smith
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cc w/encls: See next page

Millstone Nuclear Power Station
Unit 2

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Millstone Nuclear Power Station
Unit 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

DOCKET NO. 50-336

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 244
License No. DPR-65

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Northeast Nuclear Energy Company, et al. (the licensee) dated September 7, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-65 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No.244 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance, and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

B. C. Buckley for

James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: March 31, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 244

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove	Insert
3/4 7-22	3/4 7-22
B 3/4 7-6	B 3/4 7-6

that may be generically susceptible; and (2) the affected snubber is functionally tested in the as-found condition and determined OPERABLE per Specification 4.7.8.e or 4.7.8.f, as applicable. All snubbers found connected to an inoperable common hydraulic fluid reservoir shall be counted as unacceptable for determining the next inspection interval. A review and evaluation shall be performed and documented to justify continued operation with an unacceptable snubber. If continued operation cannot be justified, the snubber shall be declared inoperable and the ACTION requirements shall be met.

d. Snubber Tests

At least once per eighteen (18) months during shutdown, a representative sample (10% of the total of each type of snubber, mechanical and hydraulic, in use in the plant) shall be tested either in place or in a bench test. For each snubber that does not meet the test acceptance criteria of Specification 4.7.8.e or 4.7.8.f, as applicable, an additional 5% of that type of snubber shall be tested.

Testing shall continue until no additional inoperable snubbers are found within a sample or until all snubbers have been tested. The representative sample selected for testing shall include the various configurations, and the range of size and capacity of snubbers.

Snubbers identified as "Especially Difficult to Remove" or in "High Radiation Zones During Shutdown" shall also be included in the representative sample.*

In addition to the regular sample, in locations where snubbers had failed the previous test due to operational or environmental conditions (excessive vibration, water hammer, high radiation, extreme heat or humidity, etc.), the snubbers currently installed in these locations shall be tested during the next test period. Test results of these snubbers may not be included for the resampling. All replacement snubbers shall have been tested prior to installation.

*Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if a justifiable basis for exemption is presented.

When the cause of the rejection of a snubber is clearly established and remedied for that snubber and for any other snubbers that may be generically susceptible, that snubber may be exempted from being counted as inoperable. Generically susceptible snubbers are those which are of a specific make or model and have the same design features directly related to rejection of the snubber by visual inspection, or are similarly located or exposed to the same environmental conditions such as temperature, radiation, and vibration.

When a snubber is found inoperable, an engineering evaluation is performed, in addition to the determination of the snubber mode of failure, in order to determine if any safety-related component or system has been adversely affected by the inoperability of the snubber.

The engineering evaluation shall determine whether or not the snubber mode of failure has imparted a significant effect or degradation on the supported component or system.

To provide assurance of snubber reliability, a representative sample of the installed snubbers will be tested during plant shutdowns at eighteen (18) month intervals. Observed failures of these sample snubbers shall require testing of additional units.

Hydraulic snubbers and mechanical snubbers may each be treated as a different entity for the above surveillance programs.

The service life of a snubber is evaluated via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubber, seal replaced, spring replaced, in high radiation area, in high temperature area, etc....). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life. The requirements for the maintenance of records and the snubber service life review are not intended to affect plant operation.

3/4.7.9 DELETED

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 244

TO FACILITY OPERATING LICENSE NO. DPR-65

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

1.0 INTRODUCTION

By letter dated September 7, 1999, Northeast Nuclear Energy Company (NNECO or the licensee), the licensee for Millstone Nuclear Power Station, Unit No. 2 (Millstone 2), proposed a technical specifications (TSs) change to remove the current special exception which precludes applying the 18-month functional testing surveillance to the steam generator (SG) hydraulic snubbers. The purpose of this proposed change is to take full advantage of the inherent improved accessibility of the steam generator snubbers, for functional testing, with their new, removable control valves. NNECO proposed to include these SG snubbers in the general snubber population for snubber surveillance and testing.

2.0 BACKGROUND

The Atomic Energy Commission (AEC) required a surveillance program for hydraulic snubbers, which is governed by Millstone 2 TSs, in a letter dated December 3, 1973. This letter also required the replacement of any millable gum polyurethane or molded polyurethane seals used in Millstone 2 hydraulic snubbers. Millstone 2 received the Nuclear Regulatory Commission's (NRC) approval of its initial TS for hydraulic snubbers surveillance in 1976 based on a commitment to functionally test a 10% sample of snubbers during every refueling outage scheduled for 18-month intervals. This TS change was issued as Amendment No. 11 to Operating License DPR-65, and it specifically excluded snubbers with design load capacities greater than 50,000 pounds.

In May 1977, the SG snubbers, originally supplied with molded polyurethane seals, were refurbished with an ethylene propylene seal material having a vendor (Grinnell) recommended service life of 10 years.

In 1984, Millstone 2 requested approval for a revised TS on snubbers which extended the scope to all mechanical and hydraulic snubbers. Due to the high cost of removal associated with the SG snubbers, a special provision was requested for these snubbers. The licensee was proposing to treat these snubbers as an independent group in conjunction with their normal, vendor-recommended refurbishment interval, approximately every 5 years based on experience

to date. The NRC approved this request in a letter dated August 2, 1984, with a revised maximum interval of 7 years between test periods. This period resulted in a reduction in the period required to obtain 100% coverage of the 16 snubbers in this group in comparison with the period required to test all of the 16 snubbers based on their inclusion in the 10%-plan with the plant-wide sample.

In 1997, Millstone 2 undertook an SG snubber control valve upgrade to resolve a design deficiency with the existing bleed valve which did not allow proper adjustment of these snubbers to meet their original design function. This modification was completed without removal of the snubbers, but did fully replace the valve components which govern the lock-up and bleed functions of these components.

3.0 EVALUATION

Lateral support for each of the Millstone 2 SGs is provided by a set of 16 10-inch diameter hydraulic snubbers (rated at 225 Kips). These large bore snubbers are located between the SG and the SG block house, approximately 20 feet below the top of this concrete structure. Due to their size and lack of accessibility, these snubbers have been given a unique surveillance schedule, as previously stated, which allows them to be treated as a separate population with 100% testing and refurbishment on a 7-year cycle. Following the recent modification of these snubbers, which now allows in-place testing and inspection, in combination with remote subcomponent testing of the removable control valve, it is no longer necessary or desirable to treat these snubbers as a separate group.

As the licensee stated in its September 7, 1999, letter, the proposed TS change will delete from Surveillance Requirement 4.7.8 d, the sentence "except steam generator hydraulic snubbers," in the third line of the first paragraph and all of the last paragraph on page 3/4 7-22 which starts with "All steam generator....." The change will eliminate the current exception taken for SG snubbers, and all snubber functional test provisions will default to the requirements specified for the plant general snubber population.

The above change will result in an increase in the frequency of testing for the SG snubbers. The licensee stated that the functional reliability of the SG snubbers will be adequately addressed by their inclusion in the plant hydraulic snubber population as this will allow a more timely indication of any generic issues associated with the SG snubbers. While the period required to obtain 100% coverage of the 16 snubbers in this group will be expanded, the licensee also stated that the similarity of these snubbers, in terms of operation and environment, is such that the test sample evaluated in each refueling cycle, coupled with the concurrent 100% visual inspection of all snubbers, will provide a good indication of any functional concerns for these snubbers. This is acceptable to the staff.

It is noted that the proposed change restores these snubbers to the generally accepted 18-month surveillance requirements for hydraulic snubbers. The existing 7-year testing and refurbishment cycle was a special exception requested by the licensee to alleviate the significant burden that would have resulted due to the previous inaccessibility of these components for testing without removal and transportation for offsite testing. Therefore, if the original design of these snubbers had permitted subcomponent testing, the SG hydraulic

snubbers would have been included in the general snubber population in the first place, and would in fact be treated exactly as now being proposed by the licensee.

The licensee also indicated that the use of subcomponent testing improves the overall safety of plant personnel and reduces the risk of damage to safety-related structure, systems, and components (SSC), since the movement and transport of these large bore snubbers are not required. This is also acceptable to the staff.

Based on the above, the staff determines that the snubber testing, when performed on a consistent sampling basis instead of a 100% testing and refurbishment on a 7-year cycle, will enhance the reliability of the SG snubbers by providing maintenance and engineering personnel a periodic benchmark on the functional status of this set of snubbers. Due to the complete similarity of each of the SG snubbers, in terms of design, operation, and environmental conditions to which they are exposed, the staff also finds the proposed 10%-plan of test sample provides adequate assurance of functional capabilities for the full set of snubbers. Therefore, the proposed TS change will have no adverse effect on plant safety, and is acceptable to the staff.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Connecticut State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (65 FR 4283). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: A. Lee

Date: March 31, 2000